

In the Claims:

Kindly cancel claims 1-39 and 68 and amend claims 40, 41, and 59 as indicated below.

The following listing of claims replaces all prior versions, and listings, of claims in the application.

1-39. (Canceled)

40. (Currently amended) A method for obtaining a scaffold-based protein that binds to a compound, said method comprising:

(a) contacting a compound with a library of scaffold-based proteins under conditions that allow binding to form a compound-scaffold-based protein complex, wherein the scaffold is derived from the tenth module of human fibronectin type III (¹⁰Fn3), said tenth module having the amino acid sequence,

VSDVPRDLEVVAATPTSLLISWDAPAVTVRYRITYGETGGNSPVQEFTVPGSKS
TATISGLKPGVDYTITVYAVTGRGDSPASSKPISINYRT,

said library comprising scaffold-based proteins having at least three randomized loops and being characterized by their ability to bind to a compound that is not bound by said human ¹⁰Fn3; and

(b) obtaining, from said complex, a scaffold-based protein that binds to said

compound and that has at least one amino acid alteration in each of three loops relative to the human ¹⁰F_n3 sequence.

41. (Currently amended) A method for obtaining a compound that binds to a scaffold-based protein, said method comprising:

(a) contacting a scaffold-based protein with a candidate compound under conditions that allow binding to form a compound-scaffold-based protein complex, wherein the scaffold is derived from the tenth module of human fibronectin type III (¹⁰F_n3), said tenth module having the amino acid sequence,

VSDVPRDLEVVAATPTSLISWDAPAVTVRYRITYGETGGNSPVQEFTVPGSKS
TATISGLKPGVDYTITVYAVTGRGDSPASSKPISINYRT,

said scaffold-based protein having at least one amino acid alteration in each of three loops relative to the human ¹⁰F_n3 sequence, said scaffold-based protein being characterized by its ability to bind to a compound that is not bound by said human ¹⁰F_n3; and

(b) obtaining, from said complex, a compound that binds to said scaffold-based protein.

42. (Previously presented) The method of claim 40, said method further comprising further randomizing at least one loop of said human fibronectin type III

domain of said protein obtained in step (b) and repeating said steps (a) and (b) using said further randomized protein.

43. (Original) The method of claim 41, said method further comprising modifying said compound obtained in step (b) and repeating said steps (a) and (b) using said further modified compound.

44. (Original) The method of claim 40 or 41, wherein said compound is a protein.

45-50. (Canceled)

51. (Previously presented) The method of claim 40 or 41, wherein at least one of said randomized loops is extended in length relative to the corresponding loop of human ¹⁰Fn3.

52. (Previously presented) The method of claim 40 or 41, wherein said ¹⁰Fn3 lacks an integrin-binding motif.

53. (Original) The method of claim 40 or 41, wherein said protein is covalently bound to a nucleic acid.

54. (Original) The method of claim 53, wherein said nucleic acid encodes said protein.

55. (Original) The method of claim 53, wherein said nucleic acid is RNA.

56. (Original) The method of claim 40, wherein said compound is immobilized on a solid support.

57. (Previously presented) The method of claim 41, wherein said scaffold-based protein is immobilized on a solid support.

58. (Original) The method of claim 56 or 57, wherein said solid support is a column or microchip.

59. (Currently amended) A method for detecting a compound in a sample, said method comprising:

(a) contacting said sample with a scaffold-based protein which binds to said compound under conditions that allow binding to form a compound-scaffold-based protein complex, wherein the scaffold is derived from the tenth module of human

fibronectin type III (¹⁰F_n3), said tenth module having the amino acid sequence,
VSDVPRDLEVVAATPTSLLISWDAPAVTVRYRITYGETGGNSPVQEFTVPGSKS
TATISGLKPGVDYTITVYAVTGRGDSPASSKPISINYRT,

said scaffold-based protein having at least one amino acid alteration in each of three loops relative to the human ¹⁰F_n3 sequence, said scaffold-based protein being characterized by its ability to bind to a compound that is not bound by said human ¹⁰F_n3; and

(b) detecting said complex, thereby detecting said compound in said sample.

60. (Previously presented) The method of claim 59, wherein said scaffold-based protein is immobilized on a solid support.

61. (Previously presented) The method of claim 60, wherein said scaffold-based protein is immobilized on said solid support as part of an array.

62. (Original) The method of claim 60, wherein said solid support is a chip or bead.

63. (Previously presented) The method of claim 59, wherein said scaffold-based protein is covalently bound to a nucleic acid.

64. (Previously presented) The method of claim 63, wherein said nucleic acid encodes said scaffold-based protein.

65. (Original) The method of claim 64, wherein said nucleic acid is RNA.

66. (Original) The method of claim 59, wherein said compound is a protein.

67. (Original) The method of claim 59, wherein said compound is detected by radiography, fluorescence detection, mass spectroscopy, or surface plasmon resonance.

68. (Canceled)